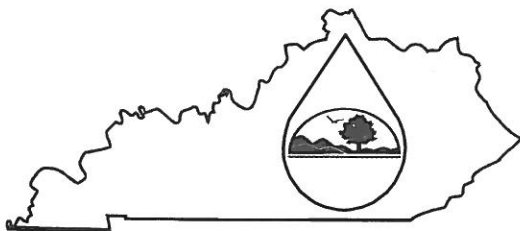


KPDES FORM SDAA



Kentucky Pollutant Discharge Elimination System (KPDES)

Socioeconomic Demonstration and Alternatives Analysis

The Antidegradation Implementation Procedure found in 401 KAR 10:030, Section 1(3)(b)3 requires KPDES permit applications for new or expanded discharges to waters categorized as "Exceptional or High Quality Waters" to conduct a socioeconomic demonstration and alternatives analysis to justify the necessity of lowering local water quality to accommodate important economic or social development in the area in which the water is located. This demonstration shall include this completed form and copies of any engineering reports, economic feasibility studies, or other supporting documentation

I. Project Information

Facility Name: Grape Creek #1 877-0175

Location: P.O. Box 1468

County: Magoffin

Receiving Waters Impacted: Grape Creek

II. Socioeconomic Demonstration

1. Define the boundaries of the affected community:

(Specify the geographic region the proposed project is expected to affect. Include name all cities, towns, and counties. This geographic region must include the proposed receiving water.)

The job site is located near the communities of Betharna & Harper in Magoffin County, along KY Routes 1593 & 1081. The receiving streams are Grape Creek, Granddaddy Branch and the Left Fork White Oak of the Licking River.

2. The effect on employment in the affected community:

(Compare current unemployment rates in the affected community to current state and national unemployment rates. Discuss how the proposed project will positively or negatively impact those rates, including quantifying the number of jobs created and/or continued and the quality of those jobs.)

Magoffin County suffers under the highest unemployment rate in the state listed at 13.1%, which is much higher than the state and national levels (5.3% and 4.6% respectively). Thirty-four percent of the population of this county lives below the poverty level. This operation will directly employ 100 on site and off site personnel responsible for daily production and operation. The operation will have an indirect effect of approximately another 100 individuals in the areas of coal transportation, mine supply, management, food services, etc.

II. Socioeconomic Demonstration- continued

3. The effect on median household income levels in the affected community:

(Compare current median household income levels with projected median household income levels. Discuss how proposed project will positively or negatively impact the median household income in the affected community including the number of households expected to be impacted within the affected community.)

As existing mining operations near their end, this operation will provide an opportunity for the workforce to continue employment in the local economy, thereby avoiding a decrease of area employment. It is extremely important to the health of the local economy that additional mining jobs are continually created. A decrease of mining operations would have a negative impact on unemployment, infrastructure and expendable income. The jobs created by this operation will not only decrease the current unemployment rates but will also provide new opportunities for employment to help meet the world's increasing demand for electricity in the future thereby avoiding the decrease of area employment with the closing of current mining operation in the county.

4. The effect on tax revenues of the affected community:

(Compare current tax revenues of the affected community with the projected increase in tax revenues generated by the proposed project. Discuss the positive and negative social and economic impacts on the affected community by the projected increase.)

This operation has the potential to remove 3.3 million tons of coal. In removing this product and placing it in the marketplace, upwards of 50 direct and indirect jobs will be created and nearly \$3 million dollars of severance tax money could be returned to Magoffin County. This money can be utilized to improve road conditions throughout the county, update education facilities and equipment for the betterment of the career opportunities available for the children and families within the area, and improve other vital services needed to provide for a more balanced community. In 2005, Magoffin County received in excess of \$4 million coal severance tax dollars. This operation will continue that trend and contribute to the tax base of this area.

II. Socioeconomic Demonstration- continued

5. The effect on an existing environmental or public health in affected community:

(Discuss how the proposed project will have a positive or negative impact on an existing environmental or public health.)

The proposed operation is within a watershed with a history of timbering and natural gas operations. The reclamation proposals addressed in the mine permit application will ensure both short and long term reforestation, pastureland for livestock and fish & wildlife enhancement.

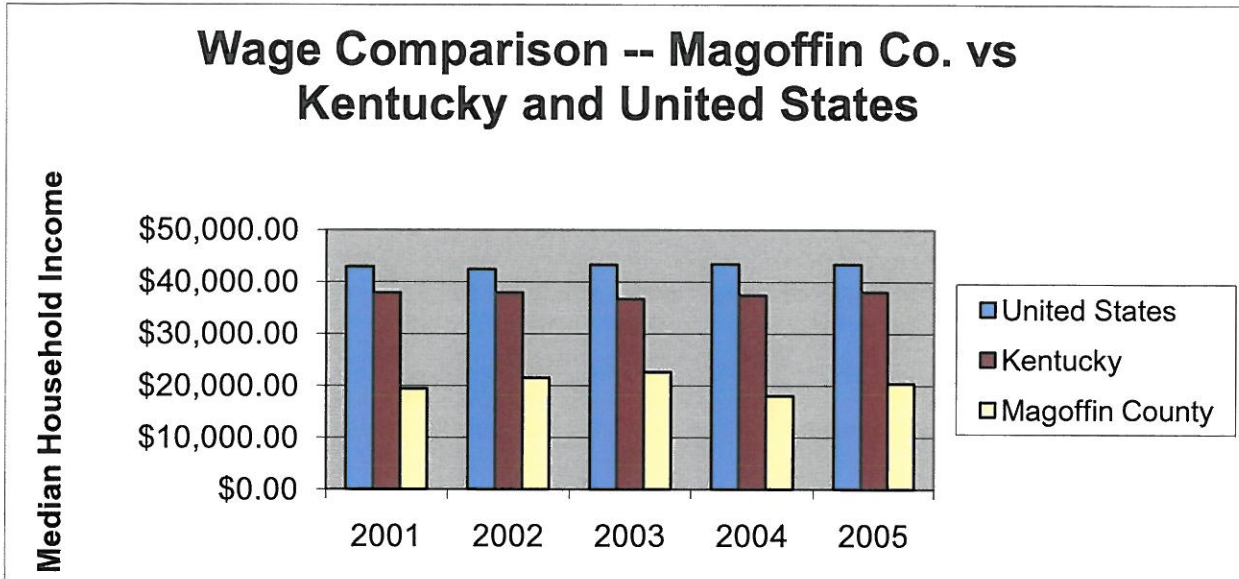
6. Discuss any other economic or social benefit to the affected community:

(Discuss any positive or negative impact on the economy of the affected community including direct and or indirect benefits that could occur as a result of the project. Discuss any positive or negative impact on the social benefits to the community including direct and indirect benefits that could occur as a result of the project.)

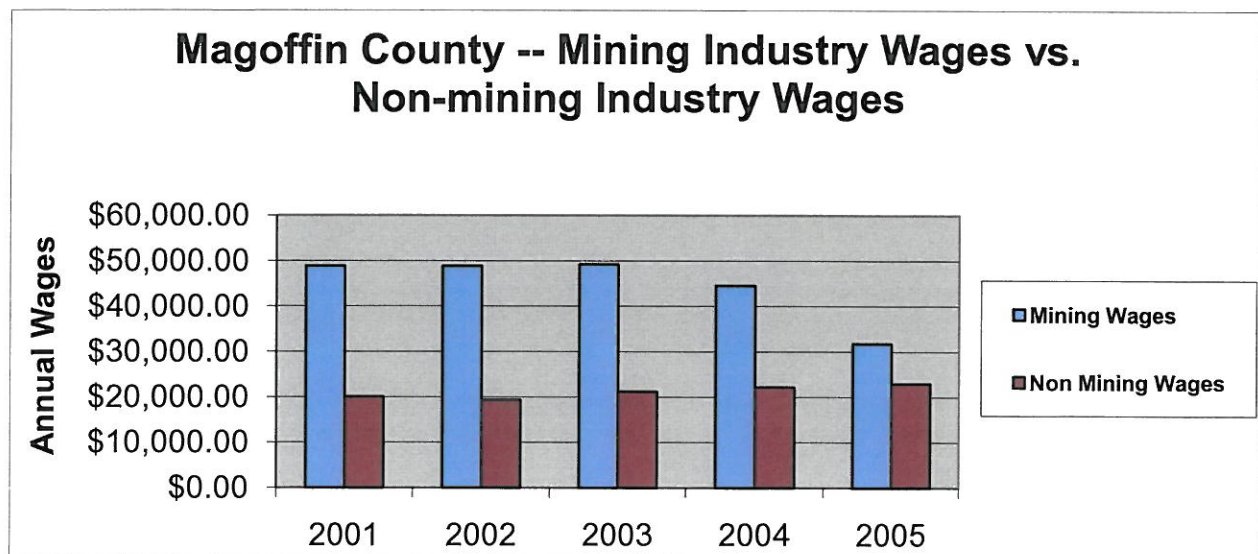
See Attachment II.6

Attachment II.6

According to the 2000 census, the median annual income for this area is less than \$22,000, which is below both state and national averages of \$36,000 and \$43,000 respectively. See the following chart.



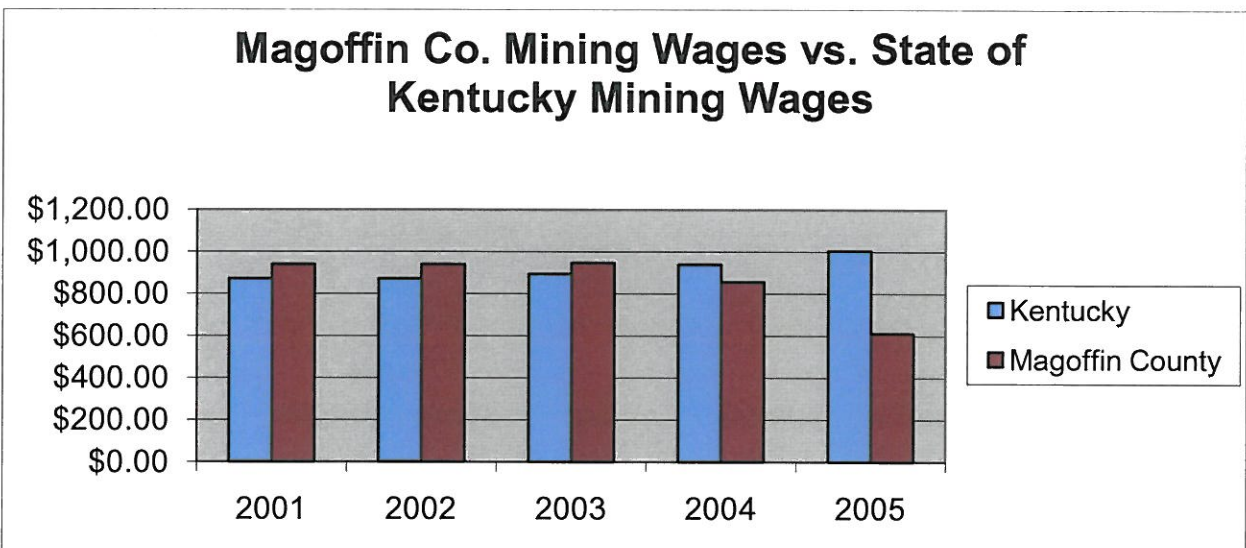
The proposed operation will provide significantly higher paying jobs in the \$35 - \$50,000 range thereby increasing the median income. See the following chart.



Attachment II.6
Socioeconomic Demonstration

Higher waged jobs will result in increased discretionary income for area families resulting in a better quality of life by allowing families to pay down personal debt, invest in their future retirement, open up educational opportunities for their children, afford better healthcare, and participate in more entertainment and pleasure purchases. Additionally, tax revenues will also lead to increases in educational, transportation and utility infrastructure.

By lowering unemployment and promoting underemployed personnel into higher wage positions the citizens of the community will benefit socially by realizing a sense of accomplishment and purpose translating into happier people. This not only benefits the local residents but also lessens the tax burden on the middle and upper classes.



III. Alternative Analysis

1. Pollution prevention measures:

(Discuss the pollution prevention measures evaluated including the feasibility of those measures and the cost. Measures to be addressed include but are not limited to changes in processes, source reductions or substitution with less toxic substances. Indicate which measures are to be implemented.)

Timbering, previous mining and natural gas production have contributed to the degradation of Grape Creek and downstream areas. This operation will facilitate proper sediment control of not only the proposed disturbance but also existing sources of degradation. By implementing the BMP's required within the permitting process for Department for natural Resources, surface runoff will be cleaner, thereby benefiting the natural environment and local communities and providing an environmentally friendly area for local wildlife and aquatic life.

An existing pond from a previous mining operation will be utilized and reconstructed for the proposed operation. An existing haul road will be resurfaced for the use of access to and from the mine.

2. The use of best management practices to minimize impacts:

(Discuss the consideration and use of best management practices that will assist in minimizing impacts to water quality from the proposed permitted activity.)

By implementing the BMP's required within the permitting process for Department for natural Resources, surface runoff will be cleaner, thereby benefiting the natural environment and local communities and providing an environmentally friendly area for local wildlife and aquatic life.

3. Recycle or reuse of wastewater, waste by-products, or production materials and fluids:

Water recycle has been investigated as an alternative to discharge. It has been determined that although a portion of the runoff will likely be used for dust suppression activities, it is not feasible to recycle all surface runoff as an alternative discharge.

The total drainage area for all ponds is 364.82 acres. An average annual rainfall of 51" (standard annual rainfall for Magoffin Co.) will yield over 505 million gallons of water per year. Average recycling capacity for any mine operation is between 1.54 and 2 million gallons of water annually. Therefore, it is not feasible to recycle all runoff during the mine operation.

As previously stated, neither the Salyersville Utilities nor West Liberty Utilities have wastewater treatment plants that can handle this amount of runoff without the installation of more sedimentation controls. This cost of the wastewater treatment plants in excess of \$1 million each just to upgrade their systems.

Watering of reclaimed lands was also considered as a possible reuse for surface runoff. However, since the slope of the area is greater than 6%, the absorption rate would not support land application.

III. Alternative Analysis - continued

4. Application of water conservation methods:

(Discuss the potential water conservation opportunities evaluated including the feasibility of implementation and the costs. Indicate which of, of these opportunities are to be implemented)

Abandoning the mining proposal as an alternative to lowering water quality was evaluated. However, this option would have a negative economic impact to multiple parties related to the mining operation. The anticipated direct and indirect jobs, coal severance tax funds, potential income taxes and much needed community infrastructure would not materialize.

Accepting the legal discharge limits to collect, store and treat all surface runoff would present insurmountable economic constraints on a safe and successful mining operation. Accepting the discharge limits and implementing alternative procedures to treat the water to an acceptable level is not feasible alternative to discharge.

5 Alternative or enhanced treatment technology:

(Compare feasibility and costs of proposed treatment with the feasibility and costs of alternative or enhanced treatment technologies that may result in more complete pollutant removal. Describe each candidate technology including the efficiency and reliability in pollutant removal and the capital and operational costs to implement those candidate technologies. Justify the selection of the proposed treatment technology.)

Several other mining options were considered for the proposed project. Mountaintop and Contour Mining were ruled out due to limited spoil storage area. Underground mining was ruled out due to the seam thickness not being adequately suited for such mining.

A combination of hay bales and silt fences were considered as an alternative to degradation. This system was determined to be unfeasible due to the elevation, grade and size of the disturbed area to adequately handle the anticipated runoff.

The construction of a flocculent water treatment plant was considered as an alternative treatment option but was considered not feasible due to the unpredictability of runoff rates and the high costs of installation, operation and demolition. Installation of the treatment and piping system alone could cost over one million dollars.

III. Alternative Analysis - continued

6. Improved operation and maintenance of existing treatment systems:

(Discuss improvements in the operation and maintenance of any available existing treatment system that could accept the wastewater. Compare the feasibility and costs of improving an existing system with the feasibility and cost of the proposed treatment system.)

Salyersville Utilities Wastewater treatment facility is located approximately 15 miles from the project area. However, discharging into this system is not feasible due to enormous capital and operational costs, estimated in the millions of dollars. A conservative estimate of \$25/ft for the installation of 15 miles of transmission lines would cost in excess of \$1.9 million alone. Additionally, the costs associated with acquiring right-of-way and easement agreements along with the installation of multiple lift/pump stations could not be absorbed as a part of a successful and safe mining operation. Another transportation option would be to utilize trucks. However, this option is not feasible. A fleet of trucks capable of handling the discharge would cost in excess of \$300,000. Additionally, the operation and maintenance costs would be an excessive burden on successful mining operations. Increased traffic on public roads also presents public safety concerns. Ultimately, the Salyersville system was not designed to handle the excess load.

The West Liberty Utilities Wastewater treatment facility is located approximately 20 miles downstream in West Liberty, Kentucky. However, due to the above stated reasons, the facility could not be utilized.

Magoffin County High School has a package wastewater treatment facility located approximately 13 miles away. However, it was not designed to handle water treatment beyond what the school itself would use.

7. Seasonal or controlled discharge options:

(Discuss the potential of retaining generated wastewaters for controlled releases under optimal conditions, i.e. during periods when the receiving water has greater assimilative capacity. Compare the feasibility and cost of such a management technique with the feasibility and cost of the proposed treatment system.)

The nearest impaired water is located approximately 15 miles from the discharge site near Salyersville, Kentucky. Per the economic evaluation outlined in Item 1, installation of a 15 mile piping system that would have to be diverted under US Highway 460 to access the impaired waters would cost in excess of \$2 million.

The steep terrain surrounding the mine site places limitations on safe storage of excess spoil. One additional site to the west of the proposed discharge, located in an unnamed tributary, was ruled out due to the presence of gas wells, gas transmission lines, and lack of right-of-entry. A discharge site was investigate east of the proposed discharge site and was ruled out due to gas transmission lines and population. Ultimately, discharge into another watershed and/or stream would simply cause the same problems in another location.

Natural gas transmission facilities prohibit necessary mining activities and lead to higher capital expenditure. Properties lacking appropriate right-of-entry lead to increased capital expenditure. These issued have been taken into consideration in the final selection of the discharge location.

III. Alternative Analysis - continued

8 Land application or infiltration or disposal via an Underground Injection Control Well

(Discuss the potential of utilizing a spray field or an Underground Injection Control Well for shallow or deep well disposal. Compare the feasibility and costs of such treatment techniques with the feasibility and costs of proposed treatment system.)

The installation of either a sanitary septic system or a leach system was considered. In order to store 505 million gallons of runoff, it would require the purchase of at least 50,000 septic tanks each costing upwards of \$15,000 (roughly \$750 million total). There are no areas in the vicinity of the mining area large enough to accommodate an operation of this magnitude. Add to the purchase of the storage tanks the cost of clean-up and removal of the tanks and/or leach bed system and an operation of this size would be financially debilitating for this mining operation.

Discharging in to old mine works was considered as an alternative to discharge, but there are no such facilities within the permit area to utilize for this purpose. Ultimately, the use of old mine works as a discharging option eliminates the possibility of further mining operations within the vicinity of the flooded seam. Mining is an important factor in the economy of this area and all precautions must be taken to preserve the industry's ability to begin new operations as existing operations are completed.

9 Discharge to other treatment systems


(Discuss the availability of either public or private treatments systems with sufficient hydrologic capacity and sophistication to treat the wastewaters generated by this project. Compare the feasibility and costs of such options with the feasibility and costs of the proposed treatment system.)

Salysersville Utilities Wastewater treatment facility is located approximately 15 miles from the project area. However, discharging into this system is not feasible due to enormous capital and operational costs, estimated in the millions of dollars. A conservative estimate of \$25/ft for the installation of 15 miles of transmission lines would cost in excess of \$1.9 million alone. Additionally, the costs associated with acquiring right-of-way and easement agreements along with the installation of multiple lift/pump stations could not be absorbed as a part of a successful and safe mining operation. Another transportation option would be to utilize trucks. However, this option is not feasible. A fleet of trucks capable of handling the discharge would cost in excess of \$300,000. Additionally, the operation and maintenance costs would be an excessive burden on successful mining operations. Increased traffic on public roads also presents public safety concerns. Ultimately, the Salysersville system was not designed to handle the excess load.

The West Liberty Utilities Wastewater treatment facility is located approximately 20 miles downstream in West Liberty, Kentucky. However, due to the above stated reasons, the facility could not be utilized.

Magoffin County High School has a package wastewater treatment facility located approximately 13 miles away. However, it was not designed to handle water treatment beyond what the school itself would use.

IV Certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Title:	Brian S. Johnson, Power-of-Attorney	Telephone No.:	(606)789-4006
Signature:		Date:	2/17/10

POWER OF ATTORNEY

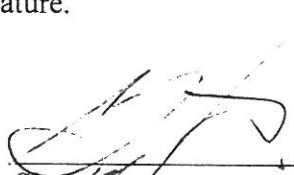
KNOWN BY ALL MEN BY THESE PRESENTS

That I, Gregg Steinhauser, Managing Partner of Xcell Energy & Coal Company, LLC, do hereby make, nominate, and appoint Brian S. Johnson of Paintsville, Kentucky as my true and lawful attorney to act in, and conduct all of my affairs in my name on my behalf, to do and execute any and all of the following specific acts, deeds, and things to-wit for Xcell Energy and Coal Company LLC:

To act in my behalf in all matters dealing with all Mining Permits (whether underground or surface), the Kentucky Department of Natural Resources, the Office of Surface Mining, Kentucky Department for Mines and Minerals and MSHA.

This Power of Attorney is specifically limited to those acts and deeds as set forth herein above, and the same shall become effective upon its execution and shall remain effective until and unless revoked by me in writing.

IN WITNESS WHEREOF, I hereto affix my hand and signature.


Signature

Subscribed and sworn to before me by Gregg Steinhauser

Date of Signature 1-1-2010

This the 1st Day of January, 2010

Notary Public Anneta Childers

My Commission Expires 9-9-2011 State in which Commissioned Kentucky